



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/783,315	02/20/2004	Michael W. Pinter	3017A.EEM C.I.P.	7823
35157	7590	07/27/2006	EXAMINER	
NATIONAL STARCH AND CHEMICAL COMPANY P.O. BOX 6500 BRIDGEWATER, NJ 08807-3300			ZIMMER, MARC S	
			ART UNIT	PAPER NUMBER
			1712	
DATE MAILED: 07/27/2006				

Please find below and/or attached an Office communication concerning this application or proceeding.

8

Office Action Summary	Application No.	Applicant(s)	
	10/783,315	PINTER ET AL.	
	Examiner	Art Unit	
	Marc S. Zimmer	1712	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-44 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-44 is/are rejected.
- 7) ☒ Claim(s) 18 and 40 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>04/28/05</u> . | 6) <input type="checkbox"/> Other: _____ |

Election/Restrictions

Applicant claims in claims 3 and 4 a composition wherein the resin binder is a blend of three materials. Claim 4 recites different embodiments of the acrylic polymer and the fluoropolymer, there being only one polyurethane mentioned. The Examiner requested that Applicant select from claim 4 a single fluoropolymer and acrylic polymer to be used in combination with the polyester polyurethane. Applicant elected that embodiment of the invention wherein the binder is a mixture of styrene acrylic, polyester urethane, and fluoroethylene/alkyl vinyl ether copolymer. Affirmation of this election must be made by applicant in replying to this Office action.

Applicant is advised that a reply to this requirement must include an identification of the species that is elected consonant with this requirement, and a listing of all claims readable thereon, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which depend from or otherwise require all the limitations of an allowable generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a). Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be

Art Unit: 1712

accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Claim Objections

Claims 18 and 40 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. As far as the Examiner has been able to ascertain, ALL forms of boron nitride may be categorized as being cubic or hexagonal and, thus, these claims do not serve to further limit claims 1 and 23 respectively.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 4 and 26 are rejected under 35 U.S.C. 112, first paragraph, because it is not at all clear what materials are to be embraced by the genus of compounds labeled "fluorinated alternative copolymers". The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-44 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. At issue is Applicant's characterization of the

Art Unit: 1712

silicone component as being "high" molecular weight. This characterization is, of course, indefinite because the Specification does not precisely define what exactly constitutes a high molecular weight silicone.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-2, 6-9, 18-19, and 21-22 are rejected under 35 U.S.C. 102(e) as being anticipated by Tamori et al., U.S. Patent Application Publication No. 2003/0073779. Tamori discloses an aqueous dispersion comprising an organosilicon polymer derived from polycondensation of one or more silane compounds (see especially paragraphs 24, 34, 43, and 53), a vinyl polymer prepared by free radical mini-emulsion polymerization in the presence of said organosilicon polymer of monomers selected from those outlined in paragraphs 59-62 (see also paragraph 23). Relevant to the present discussion, it is further contemplated that crosslinking agents that are reactive towards the functional groups of the vinyl polymer are incorporated (paragraph 138) as are UV absorbers (paragraph 96), and fillers among which include boron nitride (paragraph 164). As indicated by the title, the dispersions are used as coating materials for various substrates.

Concerning claim 9, this limitation is inherently satisfied because, as Applicant almost certainly recognizes, polymer samples always comprise chains of varying length. Even those polymers for which the polydispersity is approximately 1 will have at least a small amount of molecular weight variation.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 23-24, 28-31, 40-41, and 43-44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tamori et al., U.S. Patent Application Publication No. 2003/0073779 in view of Bogan et al., U.S. Patent # 5,567,353.

Tamori is relevant for all of the same reasons cited *supra*. Bogan, like others, documents the difficulty with which ceramics, and particularly boron nitride (column 1, lines 32-34), are dispersed. Bogan advocates adding the boron nitride to a polymer containing specified structural attributes as a means of dispersing boron nitride and other materials. The skilled artisan will appreciate that this must be done first to permit interaction between the polymer and boron nitride to take place prior to introducing other materials.

Allowable Subject Matter

Claims 3, 5, 10-18, 20, 25, 27, 32-39, and 42 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims. In the scenario outlined above, the vinyl polymer fulfills the role of the binder. The binder resin is prepared *in situ* and could possibly be one of the materials disclosed in claims 3 and 25, e.g. the acrylic component. However, there is nothing in the prior art that motivates one to also add a polyurethane and a fluoropolymer.

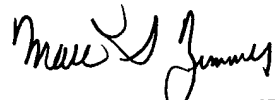
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marc S. Zimmer whose telephone number is 571-272-1096. The examiner can normally be reached on Monday-Friday 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski can be reached on 571-272-1302. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1712

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

July 21, 2006


MARC S. ZIMMER
PRIMARY EXAMINER